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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. |
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09/494,240 01/30/00 POPE

B 6056P

EXAMINER

QM12/0712

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PELLEGRINO, B

ART UNIT

PAPER NUMBER

3738

DATE MAILED:

07/12/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/494,240

Applicant(s)

POPE ET AL.

Examiner

Brian E Pellegrino

Art Unit

3738

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 April 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 and 38-79 is/are pending in the application.
- 4a) Of the above claim(s) 9-15, 19, 20, 22, 24, 50, 55, 59-61 and 70-72 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 16-18, 21, 23, 38-49, 51-54, 56-58, 62-~~69~~ and 73-79 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3,4,5,6.
- 18) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Applicant's election of Fig. 2P in Paper No. 8 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claims 9-15, 19, 20, 22, 24, 50, 55, 59-61, 70-72 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim.

Drawings

This application has been filed with informal drawings which are acceptable for examination purposes only. Formal drawings will be required when the application is allowed.

Specification

The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Objections

Claim 39 is objected to because of the following informalities: a claim cannot depend from itself. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 38, 51-54, 56-58, 62, 63, 67-69, 73, 76-79 are rejected under 35 U.S.C. 102(b) as being anticipated by Buechel et al. (5702448). Fig. 1 shows a femoral head 18 having a convex articulating surface. Buechel et al. disclose a prosthetic device with a smooth articulating surface having a substrate coated with diamond, col. 10, lines 27-42 and col. 11, lines 1-4. Buechel et al. also teach to polish the coating, col. 8, lines 47-49 and col. 9, lines 23-25. See col. 6, lines 37-56 for metals used for the substrate. Buechel et al. additionally disclose that CoCr can be used as the metal, col. 10, lines 57-58. It is inherent that the materials have CTEs and moduli that are different. The examiner asserts that the claimed physical properties (in this case, interstitial spaces in diamond and chemical bonds in zones) are present in the Buechel et al. coating to substrate application to some extent even though they are not explicitly recited.

Therefore, the examiner hereby burdens the applicant to show that these properties are not present in the prior art.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 38-49, 51-54, 56-58, 62, 63, 67-69, 73, 76-79 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davidson (5370694) in view of Buechel et al. Davidson discloses a hip joint having a coated femoral head with artificial diamond and that the coating used provides a smooth, low friction surface, col. 5, lines 52-61. Davidson also discloses that the coating is applied by physical or chemical vapor deposition methods, col. 10, lines 29-36. However, Davidson does not disclose the use of diamond as an alternative coating. Buechel et al. is explained supra. It would have been obvious to one of ordinary skill in the art to use a diamond coating as taught by Buechel et al. for the coating of Davidson in order to provide a smooth, low friction surface which is inherently present in diamond material.

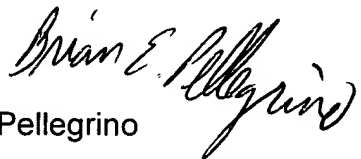
Claims 1-8, 16-18, 21, 23, 64-66, 74, 75 are rejected under 35 U.S.C. 103(a) as being unpatentable over Buechel et al. Buechel et al. is explained supra. However, Buechel et al. do not disclose a gradient zone that varies from one point to the other. It would have been an obvious matter of design choice to modify the diamond table such

that a first strata exists at one point and varies at another strata at another, since applicant has not disclosed that the variation in the gradient zone from one point to the other is an important feature or solves any stated problem or is for any particular purpose and it appears the gradient zone established would serve equally well between the end points of the articulation surface.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Pellegrino whose telephone number is (703) 306-5899. The examiner can normally be reached on Monday-Thursday from 8am to 5:30pm. The examiner can also be reached on alternate Fridays.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Corrine McDermott, can be reached at (703) 308-2111. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-2708.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0858.


Brian E. Pellegrino

TC 3700, AU 3738

July 4, 2001


Bruce Snow
Primary Examiner